Remarks

The Applicants have revised Claims 2 and 4 to clarify a certain aspect of those claims with respect to soluble carbon. Specifically, the Applicants have restated both claims so that the total amount of carbon and the soluble carbon (C_{sol}) are set forth together so that those skilled in the art can readily see the total amount of carbon is less than 0.0100% and the total amount of C_{sol} is less than or equal to 0.0050%.

These changes are made to clarify the fact that C_{sol} is not an equation. It is an amount of soluble carbon in the stainless steel stainless pipe. The remainder of the C_{sol} portion of the claim is now broken apart in a separate paragraph so that it can be seen how C_{sol} is actually determined.

The Applicants respectfully request that the above changes be entered into the official file inasmuch as they do not raise new issues and do not cause the additional need for searching since those changes are merely clarifying changes. In any event, the Applicants submit this Response together with a Request for Continued Examination to insure entry into the official file and consideration.

Claims 2-5, 7-10, 12-15 and 17-20 stand rejected under 35 USC §103 over Kimura. The Applicants respectfully submit that Kimura is inapplicable and teaches steels that are completely different from those of the Applicants without any teaching or suggestion as to the claimed subject matter. Specifically, the Applicants respectfully submit that Kimura fails to disclose, teach or suggest the Applicants' claimed amount of C_{sol} is less than or equal to 0.0050%. There simply is no such disclosure in Kimura with respect to C_{sol} at all, much less the Applicants' claimed amount. As a consequence, the Applicants respectfully submit that Kimura is nonenabling as prior art with respect to this claimed aspect.

The rejection disregards this aspect because it is part of a "formula." The Applicants disagree. C_{sol} is not a formula. C_{sol} is the amount of soluble carbon in the claimed martensitic stainless steel seamless pipe. The formula is merely used to determine what that quantity of C_{sol} in the martensitic stainless steel seamless pipe actually is. Hence, disregarding the amount of C_{sol} in the stainless steel seamless pipe as a mere formula is in error.

The Applicants further respectfully submit that Kimura is inapplicable under any potential alleged inherency of the amount of C_{sol} in the Kimura steels. This is demonstrated by reference to the attached "Comparative Table" which provides a listing of all of the 40 Examples in Kimura and the amount of C_{sol} in those 40 Examples as determined by the Applicants. The C_{sol} quantities of the 40 Examples are in the far right hand column all of which are marked yellow since they are well outside of the Applicants' claimed range.

While the Applicants fully acknowledge that Examples are not exhaustive of the disclosure of a publication, determination that 40 Examples are outside of the claimed range is surely more than ample evidence that the amount of soluble carbon in the Kimura's steels is reasonably to be expected to be outside of the Applicants' claimed range of soluble carbon in their martensitic stainless steel seamless pipes.

This is particularly true given the very high hurdle to establish inherency. In that regard, a claimed characteristic must "necessarily" be present in the prior art to satisfy the inherency requirement. It is not enough that the claimed characteristic might be present, could be present or is even likely present. The claimed aspect must "necessarily" be present. The Applicants have established by actually determining the amount of soluble carbon in the 40 Examples of Kimura that such an amount is outside of the claimed range. The Applicants therefore

EASTV44699170.1 7

respectfully submit that inherency cannot be established and Kimura is inapplicable. Withdrawal of the rejection is respectfully requested.

Claims 2-5, 7-10, 12-15 and 17-20 all stand rejected under 35 USC §103 over JP '604.

The Applicants respectfully submit that JP '604 is also inapplicable essentially for the same reasons set forth above with respect to Kimura. There is no disclosure of the amount of soluble carbon in the JP '604 stainless steel pipes. Also, the Applicants determined the amount of soluble carbon in the JP '604 stainless steel pipes and the results of those determinations are also in the enclosed "Comparative Table" wherein all 14 Examples of JP '604 have soluble carbon content well outside of the Applicants' claimed range. Hence, all of the above comments that apply to Kimura apply to JP '604 as well. Withdrawal of the rejection is respectfully requested.

With respect to both Kimura and JP '604, it becomes apparent that the Applicants have established an unexpected phenomenon associated with a unique combination of C, N and V, particularly with respect to C and N as well as the resulting impact on soluble C. This improves resistance to IGSCC on the one hand and, on the other hand, provides for the production of such superior steels at a lower cost. This is not disclosed, taught or suggested by either of Kimura and JP '604. Hence, both publications are again inapplicable.

Claims 2-5, 7-10 and 12-20 stand provisionally rejected on the grounds of nonstatutory obviousness-type double patenting over Claims 1-11 of co-pending Application No. 12/665,097. Inasmuch as this rejection is provisional, the Applicants respectfully request that further treatment of this rejection be held in abeyance pending withdrawal of the Kimura and JP '604 publications for the reasons set forth above.

8

In light of the foregoing, the Applicants respectfully submit that the entire application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,

T. Daniel Christenbury

Reg. No. 31,750

Attorney for Applicants

TDC/vp (215) 656-3381

For Demonstration Purposes Only

Comparative Table

outside the range of the smended claim 4

the range of the amended claim 4

| | the renge of | Ξį. | 20 000 | + | 1 | | | | - | | Colored Colored | · · · · · · · · · · · · · · · · · · · | Substitution of the substi | \$30000000000000000000000000000000000000 | Lowers | ibonomentenion. | | Accountance . | | The second | | 3 | *************************************** | Same and the same |
|----------------|--------------|----------------------|----------|-------|-----------------------------------------|-----------------------------------------|-------|----------------|----------|----------------------|-----------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------|-----------------|--------------|---------------|------------|-----------------------------------------|-----|-----|-----------------------------------------|-------------------|
| | | O. | <u>s</u> | u y | ما | 32 | ij | | <u> </u> | Z. | | 000 | | | | > | | | | Mg | KEM | 22 | 2 | C-86 |
| | lower finit | 0.09 | 90.0 | | | | 91 | 673 | | | | | | 1 | 1 | | 7 | | - | | | | | |
| | upper limit | Below0.0 | 0 11 | 1 | 0.03 | 0.010 | 114 | | 9.16 | Delow0,0114 | 4 | 17 | 4 | 0.15 | 10:10 | 0.10 | 0.10 | 0.010 | 0,20 10.20 | 0 | | | | 90,0050 |
| | A:US5985209 | | • | | - | *************************************** | | | | | | | | | *************************************** | | | | | | | | | |
| | No. | | | | 10. | | | | = | | 300 | Ğ | 1 | | | | | | | Mg | KEM | 22. | c | To a |
| Tab | 1 | 9.030 | 1 | 10.44 | | • | 12.10 | 3.80 | 0.02 | 2.83 | | 0.49 | - | | | | | | 1 | | | | | 991979 |
| | 4 | Ş | 6.25 | 0.47 | | | 12.9 | 4.06 | 0.02 | 8.30 | 0.95 | | | | | | | | | | | | | 0.0274 |
| | 25 | • | 1 | 10.45 | | | 13.1 | ::> | 0.02 | 88 | | 0.50 | | | 0.047 | | | | | | | | | 1810:0 |
| | * | 8 | } | 0.45 | | | 12.2 | 5.12 | 20.0 | 0.010 | 2.02 | | | | | Ī | 0.016 | | | | | | | 0.0075 |
| | 25 | į | ì | 0.44 | | | 10.7 | • | 0.02 | 8.63 | 1.58 | | | | | | - | | | | _ | - | | 0.0133 |
| | 9 | 1 | 1 | 95.0 | - | - | 11.2 | 1 | 20.0 | 8300 | 1 | 0.51 | | | | | - | | 0.03 | 31 | - | | - | 0.0143 |
| | -2 | (| ł | 19.51 | | | 111.0 | 08.0 | 0.02 | 188 | | 0.24 | | | | | e | 0.002 | - | | | | | 6880.0 |
| | 25 | | 1 | 9.50 | | - | 11.9 | 1 | 0,02 | 9,64 | 2.24 | | | 0.622 | | | - | | | | - | | | 10.0173 |
| | 6 | • | ł | 19.50 | - | - | 21.5 | 3.53 | 0.01 | 3.63.8 | 1.36 | - | | | | 202 | - | | | | | | - | 0.0103 |
| | 10 | 810.68 | ì | 0.51 | | | 12,1 | 3 | 0.03 | 88 | 1.93 | | | 0.043 | 0.015 | | - | | - | - | - | | - | 13,018% |
| | 11 | 3 | 1 | 0.49 | | - | 31.8 | Į. | 0,03 | 8,00,8 | 3.95 | - | | - | 0.020 | Ī | 0.035 | | | | - | | - | 19.01 |
| | 12 | 280.6 | 0.21 | 13.49 | | | 11.8 | 8 | 0.03 | 0000 | 0.38 | 9.58 | | | | | | | | | - | | | 0.0344 |
| | 13 | 10.013 | 61.0 | 1.51 | | - | 11.9 | * * | 0.02 | 6,063 | ~~~ | - | | | | | - | | - | | | | | 10,0273 |
| | 14 | 11000 | 0.30 | 1.53 | | | 88 | 33 23 23 | 0.03 | | 0.90 | | | | | | - | | | | - | | - | 0.0144 |
| | 15 | e | 03 9 | 1.50 | | - | 23.5 | 32 | 200 | 1 60 8 | 1 | 50.45 | | | 920 0 | | - | | - | - | - | | | 0.0536 |
| | 116 | 0.00 | 0.32 | 1.48 | | | 12.1 | 1 | 0.02 | | 16.0 | | - | | | * | | | | - | - | | - | 10000 |
| | 1.7 | 838.83 | 0; g | 3 63 | - | | 11.5 | ١. | 60.0 | 222 | 2 | - | | | | | | | | | - | | - | 0.000 |
| | 18 | | 24.5 | 100 | | | 10.5 | | 000 | | | 4 | | | 0.014 | | - | | - | - | - | | - | 2000 |
| | 10 | | 200 | e e | *************************************** | - | 6 1 1 | | 60.0 | 1000 | 46.6 | *************************************** | *************************************** | | | * | | | - | - | - | - | | |
| | 20 | | 2 2 | 9 2 | | | | | 0000 | 1000 | 3 2 | - | | | | + | - | | - | - | - | | | 100000 |
| į. | 22 | | 0 33 | 36.00 | - | | 2.4.4 | | 60.8 | 2 000 | 98 0 | - | - | | 0.000 00 0000 | 2 (18.7) | - | | - | - | - | + | | 0 0 0 0 |
| 23 25 25 | 27.5 | | 2.66 | 10.40 | | | 66.03 | - 1 | 0,02 | | 1 | 1,0 | | - | 570.70 | 2007 | - | | - | | | | - | |
| | 2 | | 67.53 | 10.47 | | | 1.4.3 | - 30 | 20.0 | 7800 | 70.7 | 7.77 | <u></u> | 3 | | 3,034 | | | + | - | + | - | | |
| | -5 | 25.0 | 0.23 | 10.42 | | | 1.2.2 | | 0.02 | 020 | 06.30 | - | - | 0,687 | 0.010 | - 1 | ************ | - | | | - | - | | 202.00 |
| | 4 | - { | 0.24 | 0.43 | | | 13.2 | - 1 | 0.02 | 880 0 | 2.15 | | - | | | | 9100 | | | | | | | 8,6113 |
| | žž. | 0.013 | 0.25 | 0.44 | | | 12.2 | | 6.62 | 8.00 | - | | | | | 0.064 | | | | | | | | 691676 |
| | 5 | 0.011 | 0.23 | (0.49 | | | 12.6 | | 0.62 | 2300 | | 0.51 | | | 0.038 4 | 3.042 | | | 0.03 | E | | | | 93:0:0 |
| | P- | 0.009 | 0.24 | 0.42 | | | 12.6 | | (i), 62 | .8 | - | 0.24 | | | 0.042 0.05 | 3.05 | <u> </u> | 0.002 | | | | | | 9,0156 |
| | 92 <u>5</u> | :8 :3 :3 :3 | 0.23 | 9.46 | | | 12.7 | | 8). 62 | F (6) | 0.84 | | | 6.022 | | 0.1 | | | | | | | | 9.0137 |
| | ග | 0.008 | 0.23 | 0.48 | | | 12.3 | | 0.03 | 27 20 20 | 1.44 | | | | 0.023 /4 | 1 | 0.012 | | - | | | | | 5800.0 |
| | 91 | 30.0 | 0.25 | j0.53 | | | 12.7 | | 20.0 | 1730 | 1.52 | | | 0.043 | 0.043 4 | 3,066 | 9 | 0.005 | | | | | | 8,0078 |
| | 11 | 0:0:0 | 0.23 | 0.49 | | | 11.8 | 1 | 0.02 | S10 0 | | | | | | 8118 | | | | | | | | 20.03 |
| | 22 | (0.003 | 0.23 | 0.53 | | | 11.3 | | Ø,02 | 33 33 30 30 | 6.38 0 | 0.58 | | | 0.057 | 3.647 | | | | | | | | 9.0215 |
| | 13 | 16.842 | 0.24 | 0.44 | | | 11.9 | | 0.03 | 880.0 | 41.7 | | | | 0.007 10.064 | 1.064 | | | | - | | | | 10,0263 |
| | T. | 0.03 | 0.25 | 0.43 | | | :S | | 20.0 | C 10 G | 0.06 | | | | 0.066 0.008 | 3003 | | | | | | | | 13.0.0 |
| | 16 | 22.00 | 9.22 | 0.50 | | | 12.2 | | 0.03 | | | 0.45 | | 0.02E | 0.035 | 3.026 | | | | | | | | 9550 |
| | 16 | 10.01 | 0.22 | 10.49 | | | 12.3 | | 0.0% | 0.943 | 0.43 | | | | 0.004 | 3.03 | | | | | | | | 10.03.41 |
| | 1.7 | 6 (3) | 0.27 | 0.51 | | | 12.1 | 1 | 0.01 | 890.9 | 1.43 | | | | 0.020 н | 3.066 | | | | | | | | 0.635.4 |
| | 87 | 0.020 | 9.22 | 0.50 | | | 10.3 | | 0.03 | 0.013 | 22 | | | 0.014 | 0.018 | :X | | | | | | | | 0.0380 |
| | 19 | 60.045 | 0.21 | 0.57 | | | 11.8 | 1.33 | 0.63 | 110/3 | 0.37 | | | | 0.076 | 0.066 | | | | | | | | 80 0538 |
| | 20 | 6000 | 10,20 | 10.52 | | | 112.4 | | 10.02 | 200 | 0.11 | - | | | 10,007 10,044 | 0.044 | - | | | *************************************** | | - | | 28 |
| | | | | | | | | | | | | | : | | | | | | | | | | | |

् œ KEM Mg 0.011 0.036 9197 10,033 9.023 0.011 0.647 0.024 æ } 0.047 0.039 0.025 Œ. 3 <u>...</u> 2.06 1.59 1.59 1.59 1.59 1.59 1.59 5.12 0.02 4.86 0.02 4.31 0.02 4.53 0.02 1.75 0.02 2.51 0.02 2.51 0.02 4.35 0.02 4.35 0.02 Manual Ma 0.51 0.33 0.28 0.28 0.28 0.28 0.000 0.000 0.000 0.000 0.000 0.000 0.000 N:JP2002-105604A